

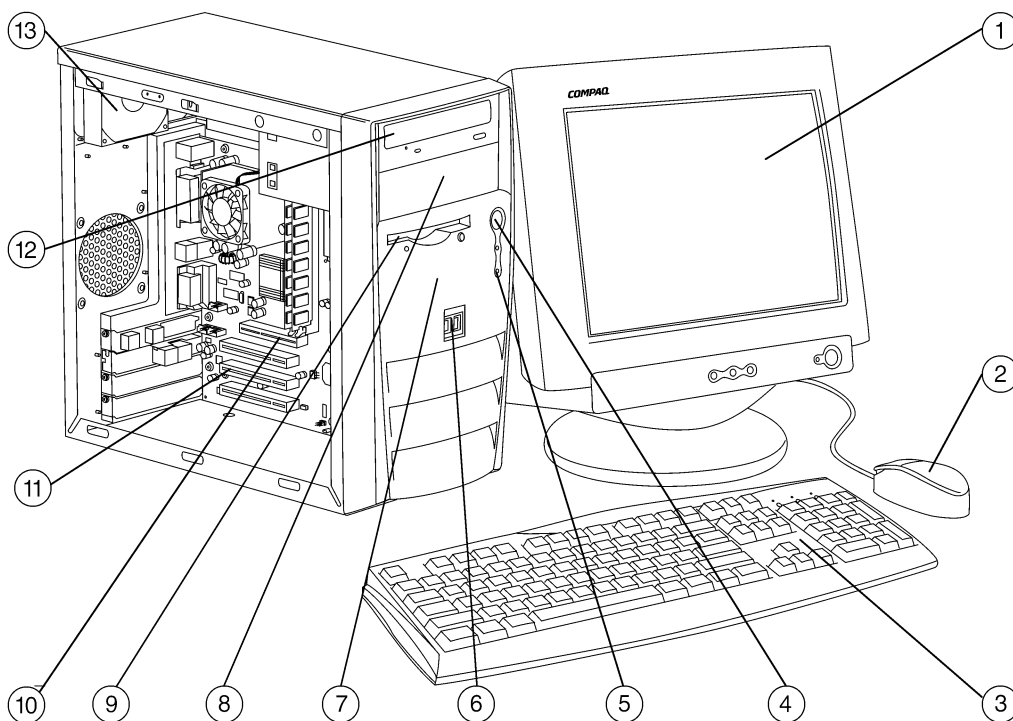
Overview

What's New

- Intel® 845G chipset
- DDR Synch Dram PC2100 (266-MHz) Memory
- USB 2.0
- 6 USB ports standard, including 2 front access ports
- Integrated Intel Extreme Graphics - 4X AGP

At A Glance

- Intel® Pentium® 4 and Celeron™ processors
- Microsoft XP Home or XP Pro operating systems
- Integrated Intel PRO/100 NIC
- Energy Star compliant with energy-saving features
- Protected by Compaq Services, including a 1-1-1 standard warranty. Certain restrictions and exclusions apply.



1. Compaq 5500 CRT Monitor (sold separately)
2. 2-Button Scroll Mouse
3. 104-Key Windows Keyboard
4. Dual-State Power Button
5. LED Indicators
6. USB Ports

7. Ultra ATA/100 Hard Drive
8. 5-1/4 Inch Expansion Bay
9. 1.44-MB Diskette Drive
10. AGP Graphics Slot
11. PCI Expansion Slots
12. 48X CD-ROM Drive
13. 250-Watt Power Supply

Standard Models and Descriptions

Pre-Configured Models

Model Key

Example:

D31vm/C17/20/x/128c

D31vm =

Evo D310v Microtower

C1.7 =

Celeron 1.7GHz processor

20 =

Hard Drive, 5400rpm

128 =

Memory, PC133 SDRAM

c =

48X CD-ROM

r =

48X CD-RW

x =

Microsoft® Windows XP Home

k =

Microsoft Windows XP Professional

Part number

Short description

Long description

DC320A#ABA

D31vm/C18/40/x/128c

Evo D310v Microtower, Intel 845G chipset, Intel Celeron 1.8Ghz Processor, 400MHz Front Side Bus, Integrated Intel Extreme Graphics, 128MB PC2100 DDR, 40GB Ultra ATA100 Hard Drive (5400 rpm), 48X CD-ROM, Integrated Intel Pro networking, Integrated AC97 Audio (optional speakers), Microsoft Windows XP Home, Compaq Enhanced Keyboard, Compaq 2-Button Mouse, 1-1-1 limited warranty.

DC322A#ABA

D31vm/C18/40/k/256c

Evo D310v Microtower, Intel 845G chipset, Intel Celeron 1.8Ghz Processor, 400MHz Front Side Bus, Integrated Intel Extreme Graphics, 256MB PC2100 DDR, 40GB Ultra ATA100 Hard Drive (5400 rpm), 48X CD-ROM, Integrated Intel Pro networking, Integrated AC97 Audio (optional speakers), Microsoft Windows XP Professional, Compaq Enhanced Keyboard, Compaq 2-Button Mouse, 1-1-1 limited warranty.

DC323A#ABA

D31vm/P24/40/k/128c

Evo D310v Microtower, Intel 845G chipset, Intel Pentium 4 2.4Ghz Processor, 533MHz Front Side Bus, Integrated Intel Extreme Graphics, 128MB PC2100 DDR, 40GB Ultra ATA100 Hard Drive (5400 rpm), 48X CD-ROM, Integrated Intel Pro networking, Integrated AC97 Audio (optional speakers), Microsoft Windows XP Professional, Compaq Enhanced Keyboard, Compaq 2-Button Mouse, 1-1-1 limited warranty.

DC324A#ABA

D31vm/P24/40/k/256r

Evo D310v Microtower, Intel 845G chipset, Intel Pentium 4 2.4Ghz Processor, 533MHz Front Side Bus, Integrated Intel Extreme Graphics, 256MB PC2100 DDR, 40GB Ultra ATA100 Hard Drive (5400 rpm), 48X/12X/48X CD-RW, Integrated Intel Pro networking, Integrated AC97 Audio (optional speakers), Microsoft Windows XP Professional, Compaq Enhanced Keyboard, Compaq 2-Button Mouse, 1-1-1 limited warranty.

Standard Features

Compaq Evo D310v Models with Intel 845G Chipset

Processor and Speed <i>One of the following</i>	Intel Celeron Processors 1.8-GHz with 400-MHz Front Side Bus	Standard L2 Cache	128-KB Integrated ECC
	Intel Pentium 4 Processors 2.4-GHz with 533-MHz Front Side Bus	Standard L2 Cache	512-KB Integrated ECC
Hard Drives	40-GB 5400 rpm Ultra ATA/100		
Standard Memory	128-MB DDR Synch Dram PC2100 (266-MHz) Non ECC 256-MB DDR Synch Dram PC2100 (266-MHz) Non ECC		
Removable Storage	1.44-MB Diskette Drive		
Optical Storage	48X CD-ROM Drive 48X/12X/48X CD-RW Drive		
Keyboard	Compaq Enhanced Keyboard		
Mouse	Compaq Scroll Mouse		
Audio	Integrated AC '97 Audio <i>(optional external speakers required)</i>		
NIC	Integrated Intel PRO/100 Network Connection		
Graphics	Integrated Intel Extreme Graphics		
Operating System	Microsoft Windows XP Home		

Standard Features – Base Unit Details

Compaq Evo D310v Models with Intel 845G Chipset

Base Unit Contents	uATX microtower chassis Intel processor: Celeron or Pentium 4 Active heatsink Systemboard with Intel 845G chipset, Intel Pro/100 NIC, integrated graphics and audio (2) ATA data cables Diskette drive with cable 20.0GB 5400rpm HDD Optical Disc drive DDR Synch DRAM PC2100 memory DIMM Product Documentation on CD Microsoft operating system CD Compaq Restore CD Power Cord Keyboard (PS/2) Mouse (PS/2)
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Expansion Capability

Memory Expansion Slots (Non-ECC)	2 DIMM's - DDR Synch Dram PC2100 (266-MHz)
Maximum Memory	2-GB

Note: Intel 845G Chipsets support DDR Synch Dram PC1600 (200-MHz) Non-ECC and DDR Synch Dram PC2100 (266-MHz) Non-ECC Memory only.
Compaq PCs ship with DDR Synch Dram PC2100 (266-MHz) Non-ECC Memory.

Slots

PCI	3 full-height slots on PCA
AGP	1 AGP 4X, 1.5V on PCA

Bays

Internal	(1) 3.5 inch Hard Drive
External:	(2) 5.25 inch half-height
Floppy:	(1) 3.5 inch Diskette Drive

Wireless Support

PCI card or external USB

USB Support

(2) Front USB 2.0 Ports
(4) Rear USB 2.0 Ports

Interfaces (Legacy)

Parallel Port	1
Serial Port	1
PS/2 Keyboard	1
PS/2 Mouse	1
VGA Adapter	1

Standard Features – Base Unit Details

Compaq Evo D310v Models with Intel 845G Chipset

Chassis Dimensions (H x W x D)

Centimeters	35.6 x 18 x 49.1 centimeters
Inches	14 x 7.1 x 19.3 inches

Chassis Weight (kgs/lbs)

System Weight	10.92 kilograms/23.8 pounds
Weight Supported	45.5 kilograms/100 pounds

Shipping Box Dimensions (H x W x D)

Centimeters	27.94 x 49.53 x 106.78 centimeters
Inches	11.0 x 19.5 x 21.5 inches

Shipping Box Weight

12.7 kilograms/28 pounds

System Memory

Type/Speed	DDR Synch Dram PC2100 (266-MHz) Non-ECC
Maximum Memory	2-GB
Memory Parity	Not Needed for non-ECC
ECC Memory	Not Supported by chipset
Serial Presence Detect Support	Supported

[Note: Maximum memory of 2-GB DDR Synch Dram can be achieved when 1-GB memory modules become available.](#)

Supported Features

Processor	Intel Pentium 4 and Celeron / Socket N - 478
CPU Bus Speed Supported	400-MHz / 533-MHz FSB
Memory Type Supported	DDR (ECC not supported by Chipset)
Memory Speed Supported	DDR Synch Dram PC1600 (200-MHz) and PC2100 (266-MHz) Non-ECC
SPD Support	Yes
Hard Drive Interfaces Supported	SMART III Ultra ATA/100/66/33
Hard Drive Controller (PCI) Supported	SMART III Ultra ATA/100/66/33

Intel® Pentium® 4

Coprocessor	Integrated
CPU Socket Type/Number	Socket N 478 pin
CPU Package	FC-PGA2
Front Side Bus Speed	400-MHz or 533-MHz
Standard L2 Cache	256-KB ECC or 512-KB ECC depending on processor speed
L2 Cache Architecture / Speed	Full core clock speed
Cache Upgradeable To	Not upgradeable - Integrated into Processor

Intel® Celeron™

Coprocessor	Integrated
CPU Socket Type/Number	Socket N 478 pin
CPU Package	FC-PGA2
Front Side Bus Speed	400-MHz
Standard L2 Cache	128-KB ECC depending on processor speed
L2 Cache Architecture / Speed	Full core clock speed
Cache Upgradeable To	Not upgradeable - Integrated into Processor

Standard Features – Base Unit Details

Compaq Evo D310v Models with Intel 845G Chipset

System Board

Architecture	P4 / PCI / AGP 4X
Chipset	Intel 845G Chipset
I/O Controller	Super I/O 3
System Board Form Factor	Standard uATX
Processor Socket - 478 Pin ZIF	Yes
DIMM Connectors (2.5V)	Yes (2)
AGP Connector (1.5V)	Yes (1)
Integrated AGP Graphics	Yes
PCI Connectors (5.0V)	Yes (3 on motherboard)
Flash ROM	Yes
Audio	Yes
CD ROM IN (Audio)	Yes
Clear CMOS	Yes
CPU Fan Header	Yes
Chassis Fan Header	Yes
Chassis Speaker Header	Yes
CMOS Battery Holder - Lithium	Yes
Hood Lock Header	No
Hood Sense Header	No
Multibay Header	No
Multport Header	No
NIC (PRO/100 VM)	Yes
Wake-On-Lan®	Yes
Alert-On-LAN®	No
Power Supply Header	Yes
Power Switch, Power LED & Hard Drive LED Header	Yes
Password Clear Header	Yes
Riser Connector	No
SCSI LED Header	Yes
Boards that connect to System Board	None

Standard Features – Base Unit Details

Compaq Evo D310v Models with Intel 845G Chipset

Chassis

Color	Carbon
Supported System Board Form Factor	Standard uATX
Flash ROM	Yes
Cooling Solutions Supported	
Power Supply Fan (Variable Speed)	Yes
Processor Fan-Heatsink (Variable Speed)	Yes
Chassis Fan	Yes
Slots Supported	3 Full-height, half-length PCI slots 1 AGP
Front I/O	2 USB
Rear I/O	Standard ATX I/O Connectors
Internal Speaker	No
Power Supply	ATX Power Supply – PFC/Non PCF with a 115v/230v line switch

Interfaces

I/O Chip	Super IO 3
Serial Port / UART Type	One Serial Port / SN75185
Parallel Port	One Parallel Port
USB (2.0)	6 ports (USB 2.0) total 4 rear/2 front
Infrared Port	No
Network	RJ-45
Keyboard	Yes (PS2)
Mouse	Yes (PS2)
Multibay	No
Multiport	No
Video	Yes
Audio	Yes

Standard Features – Base Unit Details

Compaq Evo D310v Models with Intel 845G Chipset

Power Supply

Power Supply	ATX Power Supply – PFC/Non PCF with a 115v/230v line switch
Full Ranging Input (No Line Select Switch)	No
Active Power Factor Correction (APFC)	
(Input Current is nearly 1/2 a non-APFC PS)	No
Passive Power Factor Correction (PFC)	Yes (with line switch set to 230v - No PFC in 115v line switch position)
Operating Voltage Range	90 to 132VAC, or 180 to 264VAC
Rated Voltage Range	100 to 127 VAC, or 200 to 240VAC
Rated Line Frequency	50-60 Hz
Operating Line Frequency Range	47-63 Hz
Rated Input Current	6A @ 100VAC/3A @ 200VAC
Maximum Rated Power	250W
Heat Dissipation	Max (338W input): 1061 BTU/hr Typical (65W input): 222 BTU/hr Max (269W input): 267 kg-cal/hr Typical (65W input): 56 kg-cal/hr
PS Fan	92mm fan integrated in power supply - variable speed for optimum acoustics
Processor Fan	Variable speed fan

Environmental and Mechanical Engineering Support Center

<http://env-webserver.ccm.cpqcorp.net/EMESC/default.htm>

Power Conservation 'Energy Saver'

Energy Star Compliant	Yes
APM 1.2 Support	Yes
Screen Blanking	Yes
Hard Disk 'Idle' Mode	Yes
System Idle Mode	Yes
Cache Memory Power-Down	No
Blue Angel Compliant (<5w in S5--Power Off)	Yes
Power Consumption in ES Mode - Suspend to RAM (S3) (Instantly Available PC)	~2W
Processor/Cache Memory Power-Down (S3)	Yes
CD-Rom Spins Down when not in use	Yes

Standard Features – Base Unit Details

Compaq Evo D310v Models with Intel 845G Chipset

ROM Features

Instantly Available PC (Suspend to RAM - S3)	Yes
ROM Based F10 Setup	Yes
Remote System Installation via F12 (PXE)	Yes
Failsafe Boot Block ROM	Yes
Emergency ROM Flash Recovery with Video	Yes
CMOS Archive and CMOS Restore	Yes
Save and Restore CMOS Setup via Diskette	Yes
Auto Setup when New Hardware Installed	Yes
Serial, Parallel, USB Enable/Disable Port Control	Yes
Removable Media Write / Boot Control	Yes
Remote Boot from Server	Yes
Network Server Mode	Yes
Power-On Password	Yes
Setup Password	Yes
Memory Change Alert (Requires Insight Management Agent)	Yes
Thermal Alert (Requires Insight Management Agent)	Yes
Cover Removal Alert (Requires Insight Management Agent)	No
Master Boot Record Security	Yes
Remote ROM Flash	Yes
Remote Wakeup and shutdown	Yes
Power Management	Yes
ACPI	Yes
SMBIOS 2.3 x DMI (Desktop Management Interface)	Yes
Wired for Management 2.0 Support	Yes

Standard Features – Base Unit Details

Compaq Evo D310v Models with Intel 845G Chipset

System Environmental Specs

Acoustics: Advanced Power Management - Idle (HDD spinning but not seeking) = 26 dB (pending final testing with production equipment)

On

Shock

Operating 5 G's* (with NO damage being incurred)

(*Using 11ms half-sine shock pulse)

Non-Operating

(*Using 11ms half-sine shock pulse)

10 G's*, positive and negative directions front to back axis: 20 G's* in all other axes.

Vibration

Operating

Random vibration at 0.000215 G²/Hz, 10Hz to 300Hz, (0.25G's nominal).

Non-Operating

Random vibration at 0.0005 G²/Hz, 10Hz to 500Hz, (0.5G's nominal).

Relative Humidity

Operating

10% to 90% relative humidity (Rh), 28°C maximum wet bulb temperature, non-condensing.

Non-operating

5% to 95% relative humidity (Rh), 38.7°C maximum wet bulb temperature, non-condensing.

Altitude Max (un-pressurized)

Operating

0 to 10,000 feet – This value may be limited by the type and number of options installed. Maximum allowable altitude change rate is 1500 ft/min.

Non-operating

0 to 30,000 ft 9,144 m - Maximum allowable altitude change rate is 1500 ft/min

Environmental and Mechanical Engineering
Support Center (EMESC) - Intranet Web
Site

<http://env-webserver.ccm.cpqcorp.net/EMESC/default.htm>

Software

Preinstalled Software

Windows 2000

No (drivers provided on <http://www.Compaq.com>)

Windows XP Pro

Yes

Windows XP Home

Yes

Microsoft Internet Explorer

Yes

Initial Configuration and Deployment

Support Software CD

Yes

Compaq Software Restore CD

Yes

Standard Features – Base Unit Details

Compaq Evo D310v Models with Intel 845G Chipset

Standard Security Features

Serial, Parallel, Audio, USB Enable/Disable	Yes
Port Control	
Removable Media Write / Boot Control	Yes
Power-On Password	Yes
Setup Password	Yes

System Software Updating

Remote ROM Flash	Yes
ROM Based Setup (F10) and Start-up	Yes
Diagnostics	
Support Software CD & website	Yes

Standard Features – Base Unit Details

Compaq Evo D310v Models with Intel 845G Chipset

Serviceability Features - System

Dual Color Power LED on Front of Computer	Yes (Indicates Normal Operations and Fault Conditions)
Blinking Diagnostic Keyboard LED Codes	Yes
Diagnostic LED Explanation Table	Yes (See Illustrated Parts Map)
Compaq Diagnostic for Windows Software	Yes
Compaq Configuration Record Software	Yes
Over-Temp Warning on Screen (Requires IM Agents)	Yes
Compaq OS CD (Restore OS CD)	Yes
Compaq Restore CD (Restore Drivers CD)	Yes
Flash ROM	Yes
3.3V Aux Power LED on System PCA	Yes
Dual Function 5V Aux Power LED (ON) / PS_ON LED (OFF) on System PCA	Yes
Diagnostic Power Switch LED on board	Yes (On when power switch pushed)
Clear Password Jumper	Yes
Clear CMOS Button	Yes
CMOS Battery Holder for easy Replacement	Yes
Processor ZIP Socket for easy Upgrade	Yes
DIMM Connectors for easy Upgrade	Yes
NIC LEDs (integrated) (Green & Amber)	Yes Green On = Network Activity; Amber On = 100Base-TX; Amber Off = 10Base-TX

Serviceability Features – Web Based

Support Home - Help for Drivers, ROM, and Software, Documentation	http://www.compaq.com/support/home/
Software & Drivers	http://www.compaq.com/support/home/
Ask Compaq	http://www.compaq.com/support/home/
Reference Library (Product Documents)	http://www.compaq.com/support/home/
Forums and Communities	http://www.compaq.com/support/home/
Warranty Information	http://www.compaq.com/support/home/
Your System Hardware	
Look up your Hardware	http://www3.compaq.com/support/parts/
Auto Serial Number Detect	
Support Tools	http://www3.compaq.com/support/tools/
Contact Support	http://www3.compaq.com/support/parts/
Compaq Active Update Support	http://www.compaq.com/products/servers/management/activeupdate/
End User Replaceable Parts Program	http://www.compaq.com/support/eurp/
Product Change Notification (PCN)	http://web14.compaq.com/pcn/pcnbridge.asp
ActiveUpdate	http://web14.compaq.com/pcn/pcnbridge.asp

Standard Features – Base Unit Details

Compaq Evo D310v Models with Intel 845G Chipset

Serviceability Features of Chassis

Dual Color Power and HD LED - To Indicate Normal Operations and Fault Conditions	Yes
Diagnostic LED Explanation Table	Yes (See Illustrated Parts Map)
Smart Cover Sensor	No
Smart Cover Lock	No
Front power switch	Yes
Green Pull Tabs, and Quick Release Latches for easy Identification	Yes
System memory can be upgraded without removing the system board or any internal components	Yes
Tool-less Hood Removal	Yes (with captive thumbscrews)
Tool-less Hard Drive, CD & Diskette Removal	Yes
Tool-less System Board Removal	No
Industry Standard CD Bay	Yes
Towerable	N/A
Universal Tower Stand	N/A

Serviceability Features – Hard Drives

Drive Self Tests (DPS)	Yes
DPS Access through F10 Setup during Boot	Yes
DPS Access through Diagnostics for Windows	Yes
SMART Technology (Self-Monitoring, Analysis and Reporting Technology)	Yes
SMART I - Drive Failure Prediction	Yes
SMART II - Off-Line Data Collection	Yes
SMART III - Off-Line Read Scanning with Defect Reallocation	Yes

Service and Support

On-site Warranty and Service ^{Note 1}: This one-year, limited warranty and service offering delivers one year of on-site, next business-day ^{Note 2} service for parts and labor and includes free telephone support ^{Note 3} 24 x 7. Global coverage ^{Note 2} ensures that any product purchased in one country and transferred to another, non-restricted country will remain fully covered under the original warranty and service offering.

^{Note 1}: Terms and conditions may vary by country. Certain restrictions and exclusions apply.

^{Note 2}: On-site service may be provided pursuant to a service contract between Compaq and an authorized Compaq third-party provider, and is not available in certain countries. Global service response times are based on commercially reasonable best effort and may vary by country.

^{Note 3}: Technical telephone support applies only to Compaq-configured, Compaq and Compaq-qualified, third-party hardware and software. Toll-free calling and 24 x 7 support may not be available in some countries.

After-Market Options

Communications	Modems	
	Lucent V.90 56K PCI Win Modem	239137-001
	Compaq USB 56K Fax Modem	228141-001
Graphics	2D Graphics	
	NVIDIA Vanta 16-MB SDRAM AGP	239317-B21
	NVIDIA GeForce2 MX200 16-MB SDRAM AGP	251954-B21
	NVIDIA GeForce MX400 32-MB SDRAM AGP	227003-B21
Hard Drives & Controllers	Ultra ATA/100 Hard Drives	
	80-GB 7200 rpm SMART III Ultra ATA/100 Hard Drive with DPS	250020-B21
	40-GB 7200 rpm SMART III Ultra ATA/100 Hard Drive with DPS	201066-B21
	20-GB 7200 rpm SMART III Ultra ATA/100 Hard Drive with DPS	251974-B21
	Cables	
	2 Device IDE Cable	260626-B21
	Note: Cable required with D310v when configured with a 2nd removable storage drive	
Input/Output Devices	Keyboards	
	Compaq PS/2 Easy Access Keyboard (carbon/silver)	267145-008
	Compaq USB Smart Card Keyboard (carbon/silver)	267147-008
	Compaq Cordless Desktop (Keyboard and Mouse)	251385-008
	Mice	
	Compaq PS/2 Scroll Mouse (carbon)	170299-B22
	Compaq USB Scroll Mouse (carbon)	195255-B25
	Compaq USB Optical Scroll Mouse (carbon/silver)	265985-B21
Memory (DIMMs)	266-MHz (PC2100) DDR DIMMs Non-ECC	
	1-GB DDR Synch Dram PC2100 (266-MHz) Non-ECC	282436-B21
	512-MB DDR Synch Dram PC2100 (266-MHz) Non-ECC	282435-B21
	256-MB DDR Synch Dram PC2100 (266-MHz) Non-ECC	282434-B21
	128-MB DDR Synch Dram PC2100 (266-MHz) Non-ECC	282433-B21

After-Market Options

Monitors	<i>TFTs</i>	
	Compaq TFT2025 Monitor (20-inch, Carbon/Silver) Dual Mode *	285550-003
	Compaq TFT1825 Monitor (18-inch, Carbon/Silver) Dual Mode *	296751-003
	Compaq TFT1701 Monitor (17-inch, Carbon/Silver) Analog Only	292847-003
	Compaq TFT1720 Monitor (17-inch, Carbon/Silver) Dual Mode *	295926-003
	Compaq TFT1720m Monitor (17-inch, Carbon/Silver, Comm Station) Dual Mode	301958-003
	Compaq TFT1501 Monitor (15-inch, Carbon/Silver) Analog Only	301042-003
	Compaq TFT1520 Monitor (15-inch, Carbon/Silver) Dual Mode *	295925-003
	Compaq TFT1520m Monitor (15-inch, Carbon/Silver, Comm Station) Dual Mode	301957-003
	<i>* base of the TFT supports Comm Station Multimedia Kit</i>	
	<i>CRTs</i>	
	<i>Professional Series</i>	
	HP P1130 CRT Monitor (21-inch, Carbon/silver)	302270-003
	HP P930 CRT Monitor (19-inch, Carbon/silver)	302268-003
	<i>Value Series</i>	
	Compaq V7550 CRT Monitor (17-inch, Carbon/Silver)	261611-003
	<i>Standard Series</i>	
	Compaq S9500 CRT Monitor (19-inch, Carbon/Silver)	261615-003
	Compaq S7500 CRT Monitor (17-inch, Carbon/Silver)	261606-001
	Compaq S7500m CRT Monitor (17-inch, Carbon/Silver, Integrated Speakers)	300872-001
	Compaq S5500 CRT Monitor (15-inch, Carbon/Silver)	261602-001
Multimedia	Labtec Spin-22 Speakers (carbon)	246637-001
	Altec Lansing ACS21 Speakers	194839-001
	Comm Station Multimedia Kit (carbon)	304251-008
Optical Drives	<i>DVD-ROM Drives</i>	
	16X/40X DVD-ROM Drive Read +/- (carbon)	280625-B22
	<i>CD-ROM Drives</i>	
	48X Max CD-ROM Drive (carbon)	187217-B22
	<i>CD-RW Drives</i>	
	48X/12X/48X CD-RW Drive (carbon)	303125-B21
Security	BioTouch USB Fingerprint Reader – (carbon)	240238-B21

Memory

DDR SYNCH DRAM DIMM Non-ECC MEMORY

It is not necessary to add memory in pairs or kits. Memory upgrades are accomplished by adding single or multiple DIMMs of the same or varied sizes. This chart does not represent all possible memory configurations.

845G chipset (128-MB)

DDR SYNCH DRAM DIMM Non-ECC MEMORY

STANDARD MEMORY

128-MB DIMM Standard

MAXIMUM MEMORY

Intel 845G Chipset supports up to 2-GB of DDR SYNCH DRAM. Platform can utilize 2-GB of memory when 1-GB DIMMs are available with the installation of optional DDR SYNCH DRAM Memory Kits.

Memory		Slot	
		1	2
Standard	128-MB	128-MB	Empty
Maximum Memory when 1-GB available	2-GB	1-GB	1-GB

Note: All Compaq Evo D310v Desktop models contain two DIMM slots, but can only be upgraded to a maximum of 2-GB when 1-GB DDR SYNCH DRAM are available.

Note: 1-GB DDR SYNCH DRAM not currently offered as after-market options.

Note: It is not necessary to add memory in pairs or kits. Memory upgrades are accomplished by adding single or multiple DIMMs of the same or varied sizes. This chart does not represent all possible memory configurations.

845G chipset (256-MB)

DDR SYNCH DRAM DIMM Non-ECC MEMORY

STANDARD MEMORY

256-MB DIMM Standard

MAXIMUM MEMORY

Intel 845G Chipset supports up to 2-GB of DDR SYNCH DRAM. Platform can utilize 2-GB of memory when 1-GB DIMMs are available with the installation of optional DDR SYNCH DRAM Memory Kits.

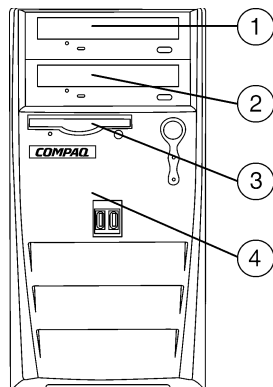
Memory		Slot	
		1	2
Standard	256-MB	256-MB	Empty
Maximum Memory when 1-GB available	2-GB	1-GB	1-GB

Note: All Compaq Evo D310v Desktop models contain two DIMM slots, but can only be upgraded to a maximum of 2-GB when 1-GB DDR SYNCH DRAM are available.

Note: 1-GB DDR SYNCH DRAM not currently offered as after-market options.

Note: It is not necessary to add memory in pairs or kits. Memory upgrades are accomplished by adding single or multiple DIMMs of the same or varied sizes. This chart does not represent all possible memory configurations.

Storage



COMPAQ EVO DESKTOP D310v - MICROTOWER DRIVE SUPPORT

	Maximum Quantity Supported	Position Supported	Controller
MICROTOWER			
Diskette Drives	1	3	Super I/O
Tape Drives	2	1,2	IDE
CD-ROM Drives	2	1,2	IDE
DVD-ROM Drives	2	1,2	IDE
CD-RW Drives	2	1,2	IDE
Ultra ATA/100 Hard Drives	Up to 3	1,2,4	Ultra ATA/100
SCSI Hard Drives	Up to 3	1,2,4	SCSI

Note: SCSI hard drives require installation of a SCSI adapter card.

Note: Adding additional tape drives, DVD-ROM, CD-RW or hard drives will require the removal of other devices.

Technical Specifications – Audio

Integrated ADI 1981A Audio	Type	Integrated
	AC '97 Stereo Codec	Yes
	OPL3 FM Synthesis Support	Yes
	Sound Blaster Compatibility	Yes
	Audio Jacks	Mic-In (20-K ohm Input Impedance)
		Line-In (12-K ohm Input Impedance)
		Line-Out * (less than 800 ohms Output Impedance, expects at least a 10-K ohm load)
		Headphone-Out (2.5 Ohms Output Impedance, expects at least a 32 ohm load)
	Note: *Internal Speaker Amplifier is for Internal Speaker only. External Speakers need to be powered externally.	
	Sampling	7KHz-48KHz
	Compression	ADPCM, ESPCM
	Wavetable Syntheses (software)	Yes
	3D Positional Sound	No
	Analog Audio:	
	Number of Channels on Line-Out (mono/stereo)	Stereo (Left & Right channels)
	Internal Audio Speaker Power Rating	3W
	Internal Tuned Port Speaker	Yes
	External Speaker Jack (Line-Out)	Yes

Technical Specifications – Communications

Integrated Intel PRO/100 VM Network Connection with WOL	Manufacturer	Intel®		
	Interface	Intel SingleDriver™ technology (10/100-Mbps support)		
	Connector	RJ-45		
	Expansion bus architecture	PCI 2.2		
	Configuration	Network transfer rate	10BASE-T (Half-Duplex) 10 Mbps 10BASE-T (Full-Duplex) 20 Mbps 100BASE-TX (Half-Duplex) 100 Mbps 100BASE-TX (Full-Duplex) 200 Mbps	
		Data interface	PCI, 32-bit bus mastering	
		I/O address	Integrated connectivity with Intel I/O Controller Hub (ICH2)-based platforms	
	Software support	Instrumentation support for CIM/WBEM SNMP, DMI, PXE 2.0, Intel PROSet utility for installation and configuration, Alert on LAN Software Developer Kit and same code		
	Remote wakeup	PME through PCI 2.2, no cable required		
	Boot PROM support	Yes, Intel PRO/100 Boot Agent (PXE 2.0, RPL)		
	Special features	Digital adaptive equalization control, link status interrupt capability, boundary scan support, 3-port LED support (speed, link, activity), 10BASE-T auto polarity correction, diagnostic loopback mode, 1:1 transmit transformer ratio support, automatic detection of unplugged mode, remote monitoring (alerting)		
	Proactive alert technology	Alert on LAN (transmit functionality only)—requires Management Console software such as HP OpenView and Altiris, alert utilities for the management console, proxy client software, client configuration software		
	F12 BIOS support	Yes		
	Environmental requirements	Operating temperature	32° to 131° F (0° to 55° C)	
		Operating humidity (non-condensing)	85% at 131° F (55° C)	
		Altitude	10,000 feet (3,048 meters)	
Non-operating temperature		-40° to 158° F (-40° to +70° C)		
Altitude		5,000 feet (15,240 meters)		
Power	300 mW typical in active transmit mode; reduced power in unplugged mode (<50 mW); 3.3 V device			
Power management	ACPI 1.0			
Flash package	48-pin Shrink Small Outline Package (SSOP)			
Network management	PCI 2.2			
LED indicators	Three-port support (speed, link, and activity)			
Standards compliance	IEEE 802.2, IEEE 802.3 and IEEE 802.3u, (100-Mbps ethernet), SCO UnixWare OpenDesktop and OpenServer, PC'99			

Technical Specifications – Graphics

Intel Extreme Graphics (Integrated with Intel 845G chipset)	Bus Type	Integrated
	AGP Interface	Supports a single 1.5v Accelerated Graphics Port Interface, Specification 2.0 compliant device Supports 1x/2x/4x data transfers and 2x/4x fast writes 32-deep AGP request queue AGP signals multiplexed with two DVO ports Supports ADD (AGP Digital Display) cards
	Core frequency	200-Mhz
	3D setup and render engine	Discrete Triangles, Strips, and Fans support Indexed vertex and flexible vertex formats Pixel accurate fast scissoring and clipping operation Backface culling support Supports D3D and OGL pixelization rules Anti-aliased lines support Spirt points support
	High quality texture engine	Per pixel perspective corrected texture mapping Single pass texture compositing (multi-textures) at rate 12 levels of detail MIP map sizes from 1x1 to 2Kx2K All texture formats including 32-bit RGBA Alpah and luminance maps Texture chroma-keying Bilinear, trilinear and anisotropic MIP-mapped filtering Cubic environment reflection mapping Embossed bump-mapping DOT3-based bump-mapping DXTn texture decompression FXT1 texture decompression
	3D graphics rasterization enhancements	200 megapixel / sec fill rate Flat and Gouraud shading Color alpha blending for transparency Vertex and programmable pixel fog and atmospheric effects Color specular lighting Z Bias support Dithering Anti-Aliasied lines 16 and 24 bit Z buffering 16 and 24 bit W buffering 8 bit stencil buffering Double and triple render buffer support 16 and 32 bit color Destination alpha Maximum 3D resolution supported 1600 x 1200 x 32 @ 85Hz Fast clear support

Technical Specifications – Graphics

Intel Extreme Graphics
(Integrated with Intel 845G chipset)
(continued)

2D Graphics

Optimized 256 bit BLT (Block Transfer) Engine

GDI+ feature support

Alpha stretch blitter

Anti aliased lines

32-bit alpha blended cursor

Programmable 3-color transparent cursor

Color space conversion

8, 16, and 32 bit color

ROP support

Video DVD / PC-VCR

Dynamic Bob and Weave support for video streams

Synclock display and TV out to video source

Source resolution up to 720 x 480 with 2 vertical taps

Software DVD at 30 fps (frames per second), full screen

Video Overlay

Single scalable overlay

Multiple overlay functionality provided via stretch blitter (PIP, video conferencing, etc.)

5 tap horizontal, 2 tap vertical filtered scaling

Independent gamma correction

Independent brightness / contrast / saturation

Independent tint / hue support

Destination color keying

Source chroma keying

Maximum source resolution: 720 x 480 (576)

Maximum overlay display resolution: 1600 x 1200 x 32 @ 60Hz, 1280 x 1024 x 32 @ 85hz.

Display

Analog display support

350Mhz integrated 24-bit RAMDAC

Up to 2048 x 1536 @ 60Hz refresh

Hardware color cursor support

DD2CB compliant interface

Multiplexed digital display channel

Two channels multiplexed with AGP

165Mhz dot clock on each 12 bit interface

Can combine two 12 bit channels to form one 24 bit channel

Supports flat panels up to 2048 x 1536 @ 60Hz or dCRT / HDTV @ 1920 x 1080 @ 85Hz.

Supports hot plug and display

Supports LVDS, TMDS transmitters or TV-out encoders

ADD card utilizes AGP connector

Three Display Control Interfaces (I2C/DDC) multiplexed on AGP

Refresh Rate with Memory Indicated

Resolution (Horizontal x Vertical)	Color Depth (Bits per Pixel)	Refresh Rate (Hz)
640 x 480	8,16 and 32	85, 85 and 85
800 x 600	8,16 and 32	85, 85 and 85
1024 x 768	8,16 and 32	85, 85 and 85
1280 x 1,024	8,16 and 32	85, 85 and 85
1600 x 1200	8,16 and 32	85, 85 and 85
1900 x 1440	8,16 and 32	75, 75 and N/A

Technical Specifications – Hard Drives

5400 rpm SMART III Ultra ATA/100 Hard Drives	40-GB	Capacity	40,000 MB	
		Rotational Speed	5400 rpm	
		Interface	Ultra ATA/100	
		Transfer Rate Synchronous (Maximum)	66 MB/s	
		Height	1 in/25.4 mm	
		Width	3.5 in/88.9 mm	
		Seek Time (typical reads, including settling)	Single Track	1.5 ms (2.9 ms quiet seek)
			Average	10.5 ms (12.4 ms quiet seek)
			Full-Stroke	23 ms (23 ms quiet seek)
		Physical Configuration	Logical Blocks	39,102,336
Operating Temperature		41° to 131°F/5° to 55°C		
	20-GB	Capacity	20,000 MB	
		Rotational Speed	5400 rpm	
		Interface	Ultra ATA/100	
		Transfer Rate Synchronous (Maximum)	66 MB/s	
		Height	1 in/25.4 mm	
		Width	3.5 in/88.9 mm	
		Seek Time (typical reads, including settling)	Single Track	1.5 ms (2.9 ms quiet seek)
			Average	10.5 ms (12.4 ms quiet seek)
			Full-Stroke	23 ms (23 ms quiet seek)
		Physical Configuration	Logical Blocks	39,102,336
Operating Temperature		41° to 131°F/5° to 55°C		

Technical Specifications – Input/Output Devices

Compaq Enhanced 104-key Keyboard	Dimensions (HxWxD)	34 x 460 x 170 (mm) 1.34 x 18.11 x 6.69 (inches)
	Weight	0.86 kg 1.90 lbs.
Electrical		
	Operating Voltage	Voltage supplied to keyboard is 5 Vdc (+/- 0.25)
	Current Consumption	Under normal 5Vdc power supplied, typical current consumption is 50mA +/- 10% for the EMC IC with three LEDs
	Power Consumption	Under normal operation, Power Consumption is less than 0.30W
	Level and Timing	Level and timing of signals presented on data and clock pins should be compatible with both TTL or MOS termination on IBM compatible host PC motherboard.
	Pin Out Connector	PS/2 6 Pin DIN connection
	Electrostatic Discharge	IEC 801-2 (Continued functionality)
	Susceptibility	Contact discharge: 2, 4, 8 KV Air discharge: 2, 4, 8, 10,12, 15KV.
Mechanical		
	Key Life	5 millions cycles under normal operation. After 5 millions return forces deviation less than 30% from original force.
	Cable Length	4.5 ft.
	Acoustics	Acoustic noise generated by key press should under 65dBA for space bar and 60dBA for other keys.
Environmental		
	Operating Temperature	10 degree C to 50 degree C
	Non-operating Temperature	-30 degree C to 60 degree C
	Operating Humidity	Relative humidity under 90% without condensation
	Non-operating Humidity	Relative humidity under 95% without condensation
	Operating Shock	40g in 11ms duration
	Non-operating Shock	80g in 11ms duration
	Operating Vibration	Sinusoidal sweeps from 10 to 500 to 10Hz 0.5 octave/min. 2.0g peak acceleration
	Non-operating Vibration	Sinusoidal sweeps from 10 to 500 to 10Hz 0.5 octave/min. 4.0g peak acceleration

Technical Specifications – Input/Output Devices

Compaq 2-Button Scroll Mouse	Scroll Wheel	8 mm
	Maximum Rotation Speed	30 mm/s
	Switch Type	Light force micro-switch
	Switch Life	1 million operations
	Mechanical Life	Minimum 200,000 revolutions
	Environmental	Operating Temperature
		50° to 122° F/10° to 50° C
		Non-operating Temperature
		–22° to 140° F/–30° to 60° C
		Operating Humidity
		10% to 90% (non condensing at ambient)
		Non-operating Humidity
		20% to 80% (non condensing at ambient)
		Operating Shock
		40 g, 6 surfaces
		Non-operating Shock
		80 g, 6 surfaces
		Operating Vibration
		2 g peak acceleration
		Non-operating Vibration
		4 g peak acceleration
	Electrical	Operating Voltage
		+5VDC ± 10%
		Power Consumption
		15mA
		System Consumption
		PS/2 mini-din connector
		ESD
		CE level 4, 15 kV air discharge
		EMI-RFI
		Conforms to FCC rules for a Class B computing device
	Mechanical	PC98
		Functionally compliant
		Resolution
		400 ± 20% DPI
		Tracking Speed
		10 in/s maximum
		Acceleration
		100 in/s
		Switch Actuation
		85 g nominal peak force
		Switch Life
		1,000,000 operations (using Hasco modified tester)
		Cable Length
		2 m
		PC98-99
		Mechanically compliant
	Regulatory Approvals	UL, CSA, FCC, CE Mark, TUV, TUV GS, VCCI, BCIQ, C-Tick

Technical Specifications – Optical Storage

48X CD-ROM Drive	Interface	ATAPI IDE	
	Data buffer	16.6 Mbps	
	Data transfer rate	Sustained—150 Kbps minimum (audio)	Variable (CD)—3,000 to 7,200 Kbps
	Disk rotation technology	CAV (Constant Angular Velocity)	
	Access time (ms)	Random: <100 ms	Full-stroke seek: <150 ms
	Average access time	< 80 ms	
	Cache buffer (standard/maximum)	128 KB	
	Disk formats read	Multi-session Photo CD, multi-read CD-ROM, CD text, audio CD, CD-I, CD-RW, CD-R, CD-Extra, CD-ROM XA	
	Disk formats written	None	
	Disk capacity (CD)	650 MB	
	Block size	Mode 1—2,048 bytes Mode 2—2,340 / 2,336 bytes CD-DA—2,352 bytes CD-XA—2,328 bytes	
	Diameter	12 cm; 8 cm	
	Thickness	1.2 mm	
	Track pitch	1.6 μ m	
	Audio output level	Line-out—0.7 V @ 47 Kohm	Headphone—0.6 V @ 32 ohm
	Startup time	<7 seconds (typical); < 30 seconds with multi-session	
	Operating conditions	Temperature	41° to 113° F (5° to 45° C)
		Relative humidity	10% to 80%
	Dimensions (HxWxD, maximum)	1.7 x 5.9 x 8.2 inches (4.3 x 15.0 x 20.8 cm)	
	Weight	2.6 pounds (1200 g)	
	MPEG playback graphics solution support	None	

Technical Specifications – Optical Storage

48X/12X/48X CD-RW Drive	Orientation	Either horizontal or vertical		
	Disc Loading Mechanism	Half-height, tray load		
	Interface Type	ATAPI IDE		
	Dimensions—external (W x H x D)	203 x 149.5 x 43.5 mm (7.99 x 5.88 x 1.71 inches)		
	Weight	1.2 kg (2.6 pounds)		
	Disc Diameter	12 cm, 8 cm		
	Disc Thickness	1.2 mm		
	Track Pitch	1.6 μm		
	Disc Center Hole Diameter	15 mm		
	Reference Scanning Velocity	1.2 m/s		
	Recording/Playing Time	80 minutes with CD-R media		
	Read Only Disc Parameters	Formats and Modes Supported	CD-ROM—Mode 1; CD-ROM XA—Mode 2 (forms 1 and 2); CD digital audio; CD Extra; CD-I—Mode 2 (forms 1 and 2) and CD-I-Ready; Photo CD (single and multi-session); video CD	
		Capacity	185 MB (Mode 2, 8cm); 540 MB (Mode 1, 12 cm); 650 MB (Mode 2, 12 cm); 700 MB (Mode 2, 12 cm)	
		Block Size	Mode 1—2,048 and 2,352 bytes; mode 2, form 1—2,048; 2,328; 2,336; 2,340 and 2,352 bytes; mode 2, form 2—2,328; 2,336; 2,340 and 2,352 bytes; CD-DA—2,352 and 2,368 bytes	
	Writeable Disc Parameters	Disc Type	CD-R and CD-RW	
		Write Methods	Disc at Once, Track at Once, Session at Once, Variable Packet, Fixed Packet	
		Format and Modes Supported	CD-ROM (mode 1); CD-ROM XA (mode 2, forms 1 and 2); CD digital audio, CD-I (mode 2, forms 1 and 2); video CD	
		Capacity	185 MB (Mode 2, 8cm); 540 MB (Mode 1, 12 cm); 650 MB (Mode 2, 12 cm); 700 MB (Mode 2, 12 cm)	
		Block Size	Mode 1—2,048 bytes; mode 2, form 1—2,048 and 2,352 bytes; mode 2, form 2—2,352 bytes; CD-DA ---2,352 bytes	
	Access Times (typical)	Random	< 120 ms	
		Full Stroke	< 200 ms	
	Data Transfer Rates	Sustained	CD-R write—1,800 KB/s (12X)	
			CD-R write—2400 KB/s (16X)	
CD-RW write (1-4X media) —600 KB/s (4X)				
CD-RW write (4-10X media) —1,500 KB/s (10X)				
CD-RW write (4-12X media) —1,800 KB/s (12X)				

Technical Specifications – Optical Storage

48X/12X/48X CD-RW Drive (continued)

		CD-RW read—3,600 KB/s (24X)		
		Digital audio extraction (minimum) —7,200 KB/s (48X)		
	Variable	CD-RW write—2,400 to 3,600 KB/s (16X to 24X)		
		CD-RW write—2,400 to 4,800 KB/s (16X to 32X)		
		CD-RW write—2,400 to 6,000 KB/s (16X to 40X)		
		CD-RW write—2,400 to 7,200 KB/s (16X to 48X)		
		CD-ROM, CD-R read—1,500 to 7,200 KB/s (10X to 48X)		
Data Transfer Modes	ATA PIO mode 4 (16.7MB/s) ; ATA multi-word DMA mode 2 (16.7 MB/s); ATA UltraDMA mode 0 (16.7 MB/s) ;ATA UltraDMA mode 1 (24 MB/s) ; ATA UltraDMA mode 2 (33 MB/s) – default.			
Cache Buffer	2 MB (minimum)			
Start-up Time (single)	< 7 seconds typical			
Start-up Time (multi-session)	< 30 seconds typical			
Stop Time	< 4 seconds			
Power	Source	Four-pin, DC power receptacle		
	DC power requirement	5 VDC ± 5%—100 mV ripple p-p		
		12 VDC ± 5%—200 mV ripple p-p		
	DC current	5 VCD	< 1A (typical)	
			< 1200 mA (maximum)	
		12 VCD	< 600 mA (typical)	
			< 1.2A (maximum)	
		Total Drive Power (Standby mode)	< 2.5 watt	
Audio Output Level	0.7 Vrms			
Configuration Jumper Block	Master, slave and cable select modes			
Data Interface Connector	50-pin IDE interface			
Environmental (all conditions, non-condensing)	Temperature (operating)	Operating 41° to 122° F (5° to 50° C)		
	Relative Humidity (operating)	10% to 85%		
	Maximum Wet Bulb Temperature (operating)	84° F (29° C)		
Certifications, Requirements	ACA AS/NZS 3548, ANSI C63.4–1992, CB Test Certificate for IEC 950, CE Mark, CFR 47 part 15, CNS 13438, CSA C22.2 No. 60950, DHHS/FDA - 1040, EN60825, EN55022:1998, EN55024, EN60 950:2000, ICES-003 class B, IEC 61000 4-2 – 4-11, Nordic EN60 950, TUV or VDE EN60 950, UL 60950, C.I.S.P.R. Publication 22 Class B, BSMI, Microsoft P2001, Microsoft Logo for Windows XP, 2000, NT4, ME, 98			
Operating Systems Supported	Microsoft® Windows® XP, Microsoft Windows 2000, Microsoft Windows NT® 4.0			

Technical Specifications – Removable Storage

1.44-MB Diskette Drive	Diskette Size	3.5 in.	
	LED Indicators (front panel)	Green	
	Read/Write Capacity per diskette (high/low density)	1.44 MB/720 KB	
	Drive Supported	One	
	Drive Height	One-third	
	Drive Rotation	300 rpm	
	Transfer Rate (high/low)	500/250 Kb/s	
	Bytes/Sector	512	
	Sectors/Track (high/low)	18/9	
	Tracks/Side (high/low)	80/80	
	Access Times	Track-to-Track (high/low)	3/6 ms
		Average (high/low)	169/94 ms
		Settling Time	15 ms
		Latency Average	100 ms

HP recommends Microsoft® Windows® XP Professional for Business.

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